

This listing of claims will replace all prior versions,  
and listings, of claims in the application:

Claims 1-7 (canceled)

1 Claim 8 (currently amended): The computer-implemented  
2 method of claim ~~[[7]]~~ 15 wherein the act of adjusting the  
3 scores includes decreasing the scores.

Claims 9-11 (canceled)

1 Claim 12 (currently amended): The computer-implemented  
2 method of claim ~~[[10]]~~ 15 wherein the performance  
3 information includes ad selection information.

1 Claim 13 (currently amended): The computer-implemented  
2 method of claim ~~[[10]]~~ 15 wherein the performance  
3 information includes ad conversion information.

1 Claim 14 (currently amended): The computer-implemented  
2 method of claim ~~[[10]]~~ 15 wherein the act of updating the  
3 multiplier is performed using a function that causes the  
4 updated multiplier to converge to observed user behavior  
5 relevant to performance divided by predicted user behavior  
6 relevant to performance.

1 Claim 15 (currently amended): A computer-implemented  
2 method comprising:  
3 a) accepting, by a computer system including at least  
4 one computer, search query information including a  
5 word;

- 6        b) determining, by the computer system, one or more  
7        words related to the word included in the accepted  
8        search query;  
9        c) generating, by the computer system, an item  
10       request including  
11           i) the word included in the accepted search  
12           query, and  
13           ii) the one or more words determined to be  
14           related to the word included in the accepted  
15           search query;  
16       d) retrieving, by the computer system, items using  
17       the item request;  
18       e) determining, by the computer system, a score for  
19       each of the retrieved items;  
20       f) adjusting, by the computer system, the scores of  
21       any items retrieved on the basis of the one or more  
22       words determined to be related to the word included in  
23       the accepted search query relative to any items  
24       retrieved on the basis of the word included in the  
25       accepted search query to generate adjusted scores,  
26       wherein the act of adjusting the scores includes  
27       multiplying each of the scores by a multiplier that is  
28       less than one;  
29       g) serving, by the computer system, at least some of  
30       the items to a client device for rendering to a user,  
31       wherein the serving is controlled, at least in part,  
32       using the adjusted scores; and  
33       h) updating, by the computer system, the multiplier  
34       using performance information,  
35       wherein the retrieved items are advertisements,  
36       wherein the act of determining a score for each

37 of the retrieved items uses at least one of ad performance  
38 information and ad price information, and  
39 ~~[[The computer-implemented method of claim 10]]~~ wherein the  
40 act of updating the multiplier is performed using the  
41 formula:

42 
$$\text{updated\_multiplier} = \frac{N \bullet \text{initial\_multiplier} + \text{observed\_user\_behavior}}{N + \text{naively\_predicted\_user\_behavior}}$$

43 wherein N is a number.

1 Claim 16 (previously presented): The computer-implemented  
2 method of claim 15 wherein the user behavior is selection.

1 Claim 17 (previously presented): The computer-implemented  
2 method of claim 15 wherein the user behavior is conversion.

Claims 18 and 19 (canceled)

1 Claim 20 (currently amended): The computer-implemented  
2 method of claim ~~[[19]]~~ 27 wherein the act of adjusting the  
3 scores includes decreasing the scores.

Claims 21-23 (canceled)

1 Claim 24 (currently amended): The computer-implemented  
2 method of claim ~~[[22]]~~ 27 wherein the performance  
3 information includes ad selection information.

1 Claim 25 (currently amended): The computer-implemented  
2 method of claim ~~[[22]]~~ 27 wherein the performance  
3 information includes ad conversion information.

1 Claim 26 (currently amended): The computer-implemented  
2 method of claim [[22]] 27 wherein the act of updating the  
3 multiplier is performed using a function that causes the  
4 updated multiplier to converge to observed user behavior  
5 relevant to performance divided by predicted user behavior  
6 relevant to performance.

1 Claim 27 (currently amended): A computer-implemented  
2 method comprising:  
3 a) accepting, by a computer system including at least  
4 one computer, search query information including a  
5 word;  
6 b) determining, by the computer system, one or more  
7 words related to the word included in the accepted  
8 search query;  
9 c) generating, by the computer system, an item  
10 request including  
11 i) the word included in the accepted search  
12 query, and  
13 ii) the one or more words determined to be  
14 related to the word included in the accepted  
15 search query;  
16 d) retrieving, by the computer system, items using  
17 the item request;  
18 e) determining, by the computer system, a score for  
19 each of the retrieved items;  
20 f) adjusting, by the computer system, the scores of  
21 any items retrieved solely on the basis of the one or  
22 more words determined to be related to the word  
23 included in the accepted search query relative to any  
24 items retrieved on the basis of the word included in  
25 the accepted search query to generate adjusted scores,

26 wherein the act of adjusting the scores includes  
 27 multiplying each of the scores by a multiplier that is  
 28 less than one;  
 29 g) serving, by the computer system, at least some of  
 30 the items to a client device for rendering to a user,  
 31 wherein the serving is controlled, at least in part,  
 32 using the adjusted scores; and  
 33 h) updating, by the computer system, the multiplier  
 34 using performance information,  
 35 wherein the retrieved items are advertisements,  
 36 wherein the act of determining a score for each  
 37 of the retrieved items uses at least one of ad performance  
 38 information and ad price information, and  
 39 ~~[[The computer implemented method of claim 22]]~~ wherein the  
 40 act of updating the multiplier is performed using the  
 41 formula:

$$\text{updated\_multiplier} = \frac{N \bullet \text{initial multiplier} + \text{observed\_user\_behavior}}{N + \text{predicted\_user\_behavior}}$$

43 wherein N is a number.

1 Claim 28 (previously presented): The computer-implemented  
 2 method of claim 27 wherein the user behavior is selection.

1 Claim 29 (previously presented): The computer-implemented  
 2 method of claim 27 wherein the user behavior is conversion.

Claims 30-32 (canceled)

1 Claim 33 (currently amended): The computer-implemented  
 2 method of claim ~~[[32]]~~ 40 wherein the act of adjusting the  
 3 score component includes decreasing the score component.

Claims 34-36 (canceled)

1 Claim 37 (currently amended): The computer-implemented  
2 method of claim ~~[[35]]~~ 40 wherein the performance  
3 information includes ad selection information.

1 Claim 38 (currently amended): The computer-implemented  
2 method of claim ~~[[35]]~~ 40 wherein the performance  
3 information includes ad conversion information.

1 Claim 39 (currently amended): The computer-implemented  
2 method of claim ~~[[35]]~~ 40 wherein the act of updating the  
3 multiplier is performed using a function that causes the  
4 updated multiplier to converge to observed user behavior  
5 relevant to performance divided by predicted user behavior  
6 relevant to performance.

1 Claim 40 (currently amended): A computer-implemented  
2 method comprising:  
3 a) accepting, by a computer system having at least  
4 one computer, search query information including a  
5 word;  
6 b) determining, by the computer system, one or more  
7 words related to the word included in the accepted  
8 search query;  
9 c) generating, by the computer system, an item  
10 request including  
11 i) the word included in the accepted search  
12 query, and  
13 ii) the one or more words determined to be  
14 related to the word included in the accepted  
15 search query;

16 d) retrieving, by the computer system, items using  
 17 the item request;  
 18 e) determining, by the computer system, a score for  
 19 each of the retrieved items, wherein a score component  
 20 is adjusted for any items retrieved on the basis of  
 21 the one or more words determined to be related to the  
 22 word included in the accepted search query relative to  
 23 any items retrieved on the basis of the word included  
 24 in the accepted search query, wherein the act of  
 25 adjusting the score component includes multiplying the  
 26 score component by a multiplier that is less than one;  
 27 f) transmitting, by the computer system, at least  
 28 some of the retrieved items towards a client device  
 29 for rendering to a user; and  
 30 g) updating, by the computer system, the multiplier  
 31 using performance information,  
 32 wherein the retrieved items are advertisements,  
 33 wherein the score component is at least one of ad  
 34 performance information and ad price information, and  
 35 [[The computer-implemented method of claim 35]] wherein the  
 36 act of updating the multiplier is performed using the  
 37 formula:

$$\text{updated\_multiplier} = \frac{N \bullet \text{initial\_multiplier} + \text{observed\_user\_behavior}}{N + \text{naively\_predicted\_user\_behavior}}$$

39 wherein N is a number.

1 Claim 41 (previously presented): The computer-implemented  
 2 method of claim 40 wherein the user behavior is selection.

1 Claim 42 (previously presented): The computer-implemented  
 2 method of claim 40 wherein the user behavior is conversion.

Claims 43-55 (canceled)

1 Claim 56 (currently amended): The apparatus of claim  
2 [[54]] 59 wherein the performance information includes ad  
3 selection information.

1 Claim 57 (currently amended): The apparatus of claim  
2 [[54]] 59 wherein the performance information includes ad  
3 conversion information.

1 Claim 58 (currently amended): The apparatus of claim  
2 [[54]] 59 wherein the act of updating the multiplier uses a  
3 function that causes the updated multiplier to converge to  
4 observed user behavior relevant to performance divided by  
5 predicted user behavior relevant to performance.

1 Claim 59 (previously presented): Apparatus comprising:  
2 a) an input for accepting search query information  
3 including a word;  
4 b) at least one processor; and  
5 c) at least one storage device storing machine  
6 executable instructions which, when executed by the at  
7 least one processor, perform a method including,  
8 1) determining one or more words related to the  
9 word included in the accepted search query,  
10 2) generating an item request including  
11 i) the word included in the accepted search  
12 query, and  
13 ii) the one or more words determined to be  
14 related to the word included in the accepted  
15 search query,  
16 3) retrieving items using the item request,



17 4) determining a score for each of the retrieved  
 18 items,  
 19 5) adjusting the scores of any items retrieved on  
 20 the basis of the one or more words determined to  
 21 be related to the word included in the accepted  
 22 search query relative to any items retrieved on  
 23 the basis of the word included in the accepted  
 24 search query to generate adjusted scores wherein  
 25 the act of adjusting uses a multiplier,  
 26 6) serving at least some of the items to a client  
 27 device for rendering to a user, wherein the  
 28 serving is controlled, at least in part, using  
 29 the adjusted scores, and  
 30 7) updating the multiplier using performance  
 31 information,  
 32 wherein the retrieved items are advertisements,  
 33 wherein the means for determining a score for  
 34 each of the retrieved items use at least one of ad  
 35 performance information and ad price information, and  
 36 [[The apparatus of claim 54]] wherein the act of updating  
 37 the multiplier uses the formula:  
 38 
$$\text{updated\_multiplier} = \frac{N \bullet \text{initial\_multiplier} + \text{observed\_user\_behavior}}{N + \text{naively\_predicted\_user\_behavior}}$$
  
 39 wherein N is a number.

1 Claim 60 (original): The apparatus of claim 59 wherein the  
 2 user behavior is selection.

1 Claim 61 (original): The apparatus of claim 59 wherein the  
 2 user behavior is conversion.

Claims 62-65 (canceled)

1 Claim 66 (currently amended): The apparatus of claim [[64]]  
2 69 wherein the performance information includes ad  
3 selection information.

1 Claim 67 (currently amended): The apparatus of claim [[64]]  
2 69 wherein the performance information includes ad  
3 conversion information.

1 Claim 68 (currently amended): The apparatus of claim  
2 [[64]] 69 wherein the act of updating the multiplier uses a  
3 function that causes the updated multiplier to converge to  
4 observed user behavior relevant to performance divided by  
5 predicted user behavior relevant to performance.

1 Claim 69 (currently amended): Apparatus comprising:  
2 a) an input for accepting search query information  
3 including a word;  
4 b) at least one processor; and  
5 c) at least one storage device storing machine  
6 executable instructions which, when executed by the at  
7 least one processor, perform a method including,  
8 1) determining one or more words related to the  
9 word included in the accepted search query,  
10 2) generating an item request including  
11 i) the word included in the accepted search  
12 query, and  
13 ii) the one or more words determined to be  
14 related to the word included in the accepted  
15 search query,  
16 3) retrieving items using the item request,

17 4) determining a score for each of the retrieved  
 18 items,  
 19 5) adjusting the scores of any items retrieved  
 20 solely on the basis of the one or more words  
 21 determined to be related to the word included in  
 22 the accepted search query relative to any items  
 23 retrieved on the basis of the word included in  
 24 the accepted search query to generate adjusted  
 25 scores, wherein the act of adjusting uses a  
 26 multiplier,  
 27 6) serving at least some of the items to a client  
 28 device for rendering to a user, wherein the  
 29 serving is controlled, at least in part, using  
 30 the adjusted scores, and  
 31 7) updating the multiplier using performance  
 32 information,  
 33 wherein the retrieved items are advertisements,  
 34 wherein the means for determining a score for  
 35 each of the retrieved items uses at least one of a  
 36 performance information and ad price information, and  
 37 [[The apparatus of claim 64]] wherein the act of updating  
 38 the multiplier uses the formula:  
 39 
$$\text{updated\_multiplier} = \frac{N \bullet \text{initial\_multiplier} + \text{observed\_user\_behavior}}{N + \text{predicted\_user\_behavior}}$$
  
 40 wherein N is a number.

1 Claim 70 (original): The apparatus of claim 69 wherein the  
 2 user behavior is selection.

1 Claim 71 (original): The apparatus of claim 69 wherein the  
 2 user behavior is conversion.

Claims 72-76 (canceled)

1 Claim 77 (currently amended): The apparatus of claim  
2 ~~[[75]]~~ 80 wherein the performance information includes ad  
3 selection information.

1 Claim 78 (currently amended): The apparatus of claim  
2 ~~[[75]]~~ 80 wherein the performance information includes ad  
3 conversion information.

1 Claim 79 (currently amended): The apparatus of claim  
2 ~~[[75]]~~ 80 wherein the act of updating the multiplier uses a  
3 function that causes the updated multiplier to converge to  
4 observed user behavior relevant to performance divided by  
5 predicted user behavior relevant to performance.

1 Claim 80 (currently amended): Apparatus comprising:  
2 a) an input for accepting search query information  
3 including a word;  
4 b) at least one processor; and  
5 c) at least one storage device storing machine  
6 executable instructions which, when executed by the at  
7 least one processor, perform a method including,  
8 1) determining one or more words related to the  
9 word included in the accepted search query,  
10 2) generating an item request including  
11 i) the word included in the accepted search  
12 query, and  
13 ii) the one or more words determined to be  
14 related to the word included in the accepted  
15 search query,  
16 3) retrieving items using the item request,

17 4) determining a score for each of the retrieved  
18 items, wherein a score component is adjusted for  
19 any items retrieved on the basis of the one or  
20 more words determined to be related to the word  
21 included in the accepted search query relative to  
22 any items retrieved on the basis of the word  
23 included in the accepted search query, wherein  
24 the score component is adjusted using a  
25 multiplier,  
26 5) transmitting at least some of the retrieved  
27 items towards a client device for rendering to a  
28 user, and  
29 6) updating the multiplier using performance  
30 information,  
31 wherein the retrieved items are advertisements,  
32 wherein the score component is at least one of ad  
33 performance information and ad price information, and  
34 [[The apparatus of claim 75]] wherein the act of updating  
35 the multiplier uses the formula:

36 
$$\text{updated\_multiplier} = \frac{N \cdot \text{initial\_multiplier} + \text{observed\_user\_behavior}}{N + \text{naively\_predicted\_user\_behavior}}$$

37 wherein N is a number.

1 Claim 81 (original): The apparatus of claim 80 wherein the  
2 user behavior is selection.

1 Claim 82 (original): The apparatus of claim 80 wherein the  
2 user behavior is conversion.

Claims 83 and 84 (canceled)

1 Claim 85 (currently amended): The method of claim 15  
2 wherein the act of retrieving ads using the ad request  
3 retrieves ads relevant to any one of the words of the  
4 generated ad request.

Claim 86 (canceled)